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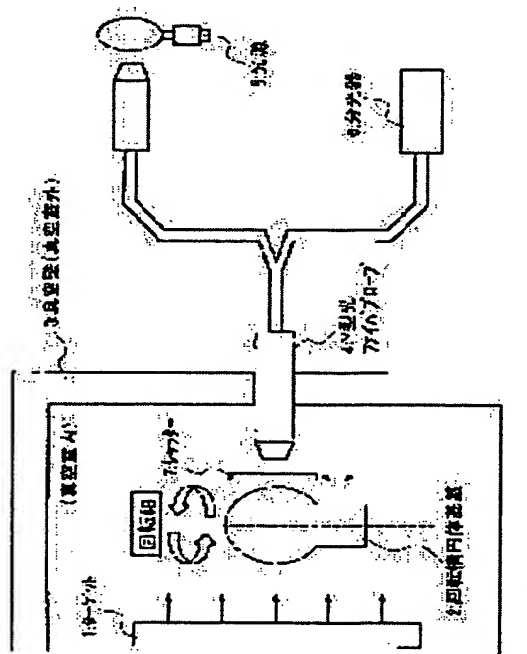
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(54) METHOD FOR DEPOSITING THIN FILM ON SURFACE OF SPHEROIDAL SUBSTRATE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for depositing a thin film while monitoring film thickness and various spectral characteristics in real time when depositing an optical film of laminated structure in a film deposition process by means of sputtering and vapor deposition of various kinds.

SOLUTION: A spheroidal substrate 2 rotating on an axis of rotation, a film deposition source (e.g. sputtering target) 1 and the tip of a Y-type optical fiber probe 4 are mutually located, within a vacuum chamber of a film deposition system, in such positions that the adhesion of film deposition particles sputtered from the film deposition source to the tip of the optical fiber probe standing behind the spheroidal substrate 2 can be prevented. While depositing a thin film on the spheroidal substrate surface 2, the temporal variation of the film-thickness value of the optical thin film and also reflection and transmission spectral characteristics can be evaluated simultaneously with film deposition, and film deposition conditions can be regulated in real time.



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